

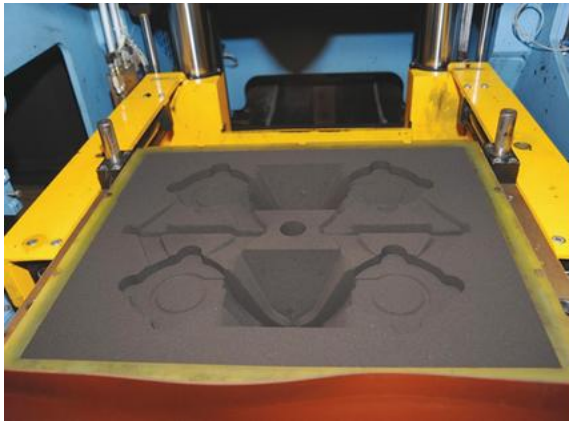
## Department of Mechanical Engineering Industrial Visit Report – Kumar Pumps & Motors, Tenali

II/IV B.Tech Regular and Lateral Entry Students of Mechanical Engineering Department were taken to Kumar Pumps & Motors, Tenali for industrial visit on 24-01-2024 to acquire knowledge by seeing practically the things happening in Kumar Pumps & Motors. Initially the Supervisory team explained demo lecture on Preparation of castings for Pumps and Motors. As a part of visit 30 students and 2 faculty (Dr. AVS Ramprasad and Dr. Priyaranjan Sharma) have visited.



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All the students were taken to the molding section, where they observed the machine molding process followed by the metal pouring section, witnessing the pouring of molten metal into the prepared molds. Subsequently, they observed the separation of semi-finished products and the removal of gating system parts separately. The prepared semi-finished parts were then subjected to an air blast device to separate the carbon particles.



Additionally, students gained an understanding of the core-making machine, witnessing the injection of core sand. In the core preparation section, they examined how to correct a damaged core, which is necessary for placement in the prepared mold. The process of preparing molten metal in an electric induction



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furnace was also observed, along with a clear visualization of how impurities were removed from the molten metal.

Following this, students were guided to the machining section, where they observed vertical machining, horizontal machining centers, and pick-and-place robots that work on different shapes and sized workpieces to achieve the desired geometry with precision and quality. After the machining process, the demonstration extended to the assembly section, showcasing how individual prepared parts were assembled. The discussion further covered packaging after inspection.

In this manner, students acquired knowledge of processing a semi-finished product at various stages of molding and machining processes, comprehending and retaining the information."

At last, Dr. AVS Ramprasad, Associate Professor and Dr. Priyaranjan Sharma, Associate Professor thanked management of Kumar Pumps & Motors for accepting and providing guidance for the industrial visit.



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